



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------------------------|-------------|-----------------------|-------------------------------|------------------|
| 09/143,583 | 08/31/1998 | CHARLES EDWARD BOWERS | 30-2138CIP2 | 3710 |
| 7590 06/15/2004 HONEYWELL INTERNATIONAL INC. 15801 WOODS EDGE ROAD COLONIAL HEIGHTS, VA 23834 | | | EXAMINER YAO, SAMCHUAN CUA | |
| | | | ART UNIT 1733 | PAPER NUMBER |

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/143,583

Applicant(s)

BOWERS, CHARLES EDWARD

Examiner

Sam Chuan C. Yao

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 4-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Queen et al (US 5,567,256) in view of (Stahlecker et al (US 4,484,433) or Nomura et al (US 5,611,819)), Scott (US 4,668,552) and GB 2,205,116 A.

With respect to claims 1 and 15, Queen et al discloses a process of making blended yarns for carpet rugs, the process comprises spinning 70-90% of cotton fibers and 30-10% of heat-activated polyester binder fibers to form blended yarns, ply twisting the blended yarns; and then heat-setting the ply twisted yarns at a temperature of about 275 °F (i.e. 135 °C) to melt the binder fibers "*so that the cotton fibers are impregnated, reinforced and strengthened*" by the fibers (abstract; col. 1 line 48 to col. 3 line 4; claim 1; figure 1). Although not explicitly disclosed, it is understood that, a bundle or a sliver of cotton fibers is fed into a spinning station. In any event, such would have been obvious in the art as such is conventional in the art of forming yarn by spinning. Moreover, reading the

Queen et al patent as a whole, one in the art would have reasonably understood that, the cotton fibers and heat-activated binder fibers are separately fed into a spinning device (i.e. blending is performed at a yarn level) as evidence from figure 1 and passages in column 1 lines 50-52 and column 2 lines 51-54. In any event, such would have been obvious in the art because: a) it is old in the art to form "*a blended yarn*" or a "*mixed yarn*" by separately feeding different types of fibers into a ring or wrap spinning machine as exemplified in the teachings of Nomura et al (col. 7 line 63 to col. 8 line 12) or Stahlecker et al '433 (abstract; col. 1 lines 6-12; col. 2 lines 3-19; col. 3 lines 40-43; col. 4 lines 29-58; figure 2); and b) it is also old in the carpet making art to separately feed a "[t]exturized [b]inder [y]arn" and a base fiber to a wrap spinning operation to uniformly spirally wrapped the binder yarn around the base fiber to form a tufting yarn as taught for example by Scott (col. 6 lines 52-68; figures 3-5 and 8, and Counsel's characterization of Scott's process illustrated in figure 3 on 08-14-03). Queen et al differs from claims 1 and 15, in that, Queen does not expressly disclose the type of spinning technique which is used in making a blended yarn. In particular, Queen et al does not expressly disclosed using either a ring-spinning or wrap spinning method in forming a blended yarn. However, it would have been obvious in the art to use either a ring-spinning or wrap spinning technique in making a blended yarn taught by Queen et al, because: a) it is conventional in the art to make yarns by

either ring spinning method or wrap spinning method; b) it is known in the art of making yarn to form a blended or mixed yarn by wrap or ring spinning method as disclosed for example by Stahlecker et al '433 (col. 2 lines 3-11; col. 3 lines 40-43; figure 2) or Nomura et al (col. 7 line 63 to col. 8 line 12); and c) it is well known in the art to **wrap-spin** and heat-activate a blend of heat-activated binder-fibers and base fibers to stabilize a blended carpet yarn thereby *"improving the tuft definition and appearance retention"* as exemplified in the teachings of GB '116 (abstract; page 6 full paragraph 1; claim 1).

With respect to claim 3, it is conventional in the art to form bundles of staple cotton fibers by spinning them together.

As for an added limitation of a second fiber being wrapped around a bundle of a first base, such would naturally flow from the teachings of Queen et al where a blended yarn is formed by wrap spinning a bundle of cotton base fibers and binder fibers. In any event, it would have been obvious in the art to wrap spin binder fibers around a bundle of cotton base fibers in forming a blended yarn, because it is old in the art to form a blended carpet yarn where heat-activated binder fibers are wrapped around a bundle of base fibers.

As for an added limitation of a binder material encapsulating a first base fiber as the binder material flows to intersection points with a first base fibers thereby retaining the twist in a blended yarn, such would naturally

flow from a wrap spun blended yarn of Queen et al, because heat melted binder fibers which are wrapped around a bundle of cotton base fibers would naturally flow to intersection points with a first base fibers thereby retaining the twist in a blended yarn.

3. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 2 above as applied to claim 1, and further in view of Lofquist (US 5,478,624).

It would have been obvious in the art to substitute the polyester binder fibers suggested by Queen et al (US 5,567,256) with a nylon6/nylon 66 copolymer binder fibers, because Lofquist teaches using a nylon6/nylon 66 copolymer binder fibers in forming a blended carpet yarn since the copolymer binder is the *"most attractive from a standpoint of both economics and efficacy"* (col. 4 lines 42-59).

4. Claims 1-3 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stahlecker et al (US 4,495,758) in view of Lofquist (US 5,478,624), Queen et al (US 5,567,256), GB 2,205,116 A, and Scott (US 4,668,552).

Stahlecker et al '758 discloses a process of making wrapped yarns, the process comprises wrap spinning a binder strand and a yarn sliver together to spirally wrap the binder strand around the yarn sliver (col. 1 lines 9-40; abstract).

It is unclear whether the binder strand taught by Stahlecker et al and the binder strand of related arts disclosed in the background of the invention are

heat-activated adhesive. In any event, it would have been obvious in the art to use a heat-activated binder strand in making carpet yarns in a the process taught by Stahlecker et al '758 because: a) GB '116 discloses spinning such as **wrap-spinning** and heat-activating a blend of binder-fibers containing heat-activated adhesive and base fibers to stabilize a blended carpet yarn thereby *"improving the tuft definition and appearance retention"* (abstract; page 6 full paragraph 1; claim 1); b) Queen et al discloses making yarns for carpet rugs by spinning cotton fibers and heat-activated binder fibers to form blended yarns, ply twisting the blended yarns and then heat-setting the ply twisted yarns to melt the binder fibers *"so that the cotton fibers are impregnated, reinforced and strengthened"* by the fibers (abstract; col. 1 line 48 to col. 3 line 4; claim 1; figure 1); and c) it is old in the carpet art to form a yarn by spirally wrapping heat-activated binder fibers around base fibers using **wrap-spinning** technique as exemplified in the teachings of Scott (col. 2 lines 60-65; col. 6 lines 52-68; figures 3-4 and 8-9; and, figure 3 of Counsel's characterization of Scott on 08-14-03). Note: Scott also discloses the advantage of enhancing *"the integrity of the fabric"* in using heat-activated binder fibers in forming a blended wrap yarn (col. 2 lines 60-65).

Stahlecker et al '758 does not teach twisting two or more yarns to form a plied yarn and then heat-setting the plied yarn. However, it would have been obvious in the art, motivated by the desired to apply the yarn making process of Stahlecker et al to form carpet yarns, to twist two or more yarns to form a plied yarn and then to heat-set the plied yarn as such is conventional in the art of

Art Unit: 1733

making carpet yarns as evidence from the teachings of Lofquist (col. 1 62 to col. 2 line 13) in order to obtain the desired carpet yarn bulk. Note: as noted above, Queen et al also teaches twisting two or more yarns to form a plied yarn and then heat-setting the plied yarn.

The process of Stahlecker '758 and the related art are silent on the composition of the binder relative to the yarn sliver. However, such would have been obvious in the art because Lofquist discloses the desirability of blending 1-12 weight per cent of binder strand to a base yarn to form a carpet yarn (col. 2 lines 28-58); because Scott discloses spirally wrapping about 3-10 weight per cent (based on the total weight of the yarn) of binder strand around a base strand (claims 2 and 6); and, because one in the art would have determined a workable composition of a blended yarn for the desired end-use of the article. As for the steps of heating to melt the binder around the yarn and cooling to harden the binder, such would have been obvious in the art as such is conventional in the art as taught by Scott and Lofquist.

As for the added limitations, for the same reasons set forth in numbered paragraph 2 above, these limitations would naturally flow from the teachings of Stahlecker '758.

With respect to claims 2-3, 14-16 and 17-20, see column 3 line 13 to column 4 line 59 of the Lofquist patent.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

Art Unit: 1733

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3 and 14-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all claims in U.S. Patent No. 6,682,618 in view of Queen (US 5,567,256) or Lofquist (US 5,478,624).

It would have been obvious in the art to perform the process in recited in step c in claim 1 of the present application as such is well known in the blended carpet yarn making art as exemplified in the teachings of either Queen or Lofquist.

Response to Arguments

6. Applicant's arguments filed on 04-20-04 have been fully considered but they are not persuasive.

On page 2 full paragraph 1, Counsel argues "*Queen et al. fails to teach ring spinning or wrap spinning a bundle of a first base fiber with a second fiber of a heat-activated binder material Queen, et al do not mention nylon fibers, ... Queen, et al in their step (10) of Fig. 1, merely bundles both cotton and polyester fiber together whereas the instant invention first forms a bundle of a first fiber and then ring or wrap spins that bundle of fiber with a second fiber. ... The examiner*

thus attempts to fill this void by citing Nomura et al and Stahlecker et al."

Examiner agrees with Counsel that, "*Queen et al. fails to teach ring spinning or wrap spinning a bundle of a first base fiber with a second fiber of a heat-activated binder material*". That's precisely the reason why claim 1 is not rejected under 35 USC 102 as being anticipated by Queen. As noted earlier, the only critical difference between the process taught by Queen et al and claim 1 is: Queen et al is silent on groups of cotton fibers and binder fibers are spun together to form a blended yarn. However, it would have been obvious in the art to form a blended yarn in a process taught by Queen et al, because: as noted above, a) it is conventional in the art to make yarns by either ring spinning method or wrap spinning method; b) it is known in the art of making yarn to form a blended or mixed yarn by wrap or ring spinning method as disclosed for example by Stahlecker et al '433 (col. 2 lines 3-54; col. 3 lines 40-43; figure 2) **or** Nomura et al (col. 7 line 63 to col. 8 line 12); and c) it is well known in the art to **wrap-spin** and heat-activate a blend of heat-activated binder-fibers and base fibers to stabilize a blended carpet yarn thereby "*improving the tuft definition and appearance retention*" as exemplified in the teachings of GB '116 (abstract; page 6 full paragraph 1; claim 1). As for Counsel's argument regarding Queen et al not using nylon fibers, Examiner agrees. That's the reason why claims 16 and 19-20 are not rejected under 35 USC 103 over Queen et al. As for Counsel's arguments on pages 2-3 regarding Nomura et al and Stahlecker et al '433, Examiner agrees with Counsel that, neither Nomura et al nor Stahlecker '433

Art Unit: 1733

teaches using heat-activated binder fibers. However, the Nomura et al and Stahlecker patents are cited to show that it is known in the art to form a blended or mixed yarn by wrap or ring spinning method.

On page 3 full paragraph 1, Counsel argues that *"The examiner asserts that a bundle of fibers reads on a yarn. ... The Examiner is required to provide a prima facie case of obviousness establishing the characteristics of a yarn prior to shifting the burden to Applicants to demonstrate that the claims present a feature different from the cited prior art."* Examiner would like to reiterate that, a bundle of fibers reads on a yarn. According to a dictionary definition (The American Heritage Dictionary Secondary College Edition), a term bundle, it is *"a group of objects tied, fastened, wrapped, or otherwise held together."* As for a term yarn, it is defined from the same dictionary as *"[a] continuous strand of twisted threads of natural or synthetic material, such as wool or nylon, used in weaving or knitting."* Based on the above definitions, a yarn is clearly a group of threads which are tied or held together by subjecting the thread to a twisting operation. Therefore, a bundle of fibers fails to distinguish over a yarn.

On page 3 full paragraph 2, Counsel argues that, Stahlecker '433 does not teach using heat-activated binder fibers as a wrapping fiber; and accordingly, there is no motivation to use heat-activated binder wrapping fibers. While Counsel may be correct that the Stahlecker '433 patent does not teach using wrapping heat-activated binder fibers. Examiner, however, strongly disagrees with Counsel's assertion that there is no motivation to use heat-activated binder wrapping fibers

Art Unit: 1733

in the process taught by Queen et al. Ring spinning or wrap spinning is a conventional and well known method in the art of making a yarn. As noted earlier, it is also known in the art to form a blended or mixed yarn by wrap or ring spinning method as disclosed for example by Stahlecker et al '433 (col. 2 lines 3-11; col. 3 lines 40-43; figure 2) or Nomura et al (col. 7 line 63 to col. 8 line 12); and, it is well known in the art to **wrap-spin** and heat-activate a blend of heat-activated binder-fibers and base fibers to stabilize a blended carpet yarn thereby *"improving the tuft definition and appearance retention"* as exemplified in the teachings of GB '116 (abstract; page 6 full paragraph 1; claim 1). For these reasons, and in view that Queen et al is not restrictive to using a particular spinning method to form a blended yarn, it would have been obvious in the art to use a conventional yarn making method such as a wrap spinning or ring spinning to form a blended yarn taught by Queen. With respect to Counsel's assertion on the same paragraph that *"... Examiner is looking beyond the teachings of the references."*, Examiner strongly disagrees. It is suggested for Counsel to particularly point out where in the Examiner's office action under which references are applied beyond what are taught.

On page 3 last paragraph, *"Scott also pertains to wrapping a multi-strand binder yarn 12 around a multi-strand body yarn 11. The examiner takes the position that it is old in the art to conduct a wrap spinning operation to uniformly spiral wrap a binder yarn around a base yarn. However, it is urged that the examiner's point is irrelevant because in this reference there is no spinning a bundle of fibers with a*

second fiber to thereby form a yarn.”. Examiner strongly disagrees. In fact, as illustrated in figure 3 of Counsel’s response dated 08-14-03, a blended yarn taught by Scott is formed by separately feeding a “[t]exturized [b]inder [y]arn” and a base fiber to a wrap spinning device so that the texturized binder yarn is spirally wrapped around the base fiber. See the attached Applicant’s illustration of Scott’s process shown in figure 3.

On page 4 full paragraph 3, Counsel argues that *“[i]t is urged that the mere fact that five references have been combined to support the examiner’s finding of obviousness is, in itself, an indication of non-obviousness.”* (emphasis in original). It should be emphasized at the outset that, the only critical difference between claim 1 and the process of Queen et al is that, Queen et al is silent on what type of conventional spinning technique (i.e. a ring or wrap spinning technique) is used to form a blended yarn. Stachlecker et al and Nomura et al, which are used in an alternative form, are cited as evidence to show that it is well known in the art to form a blended yarn using a wrap or ring spinning technique. Equally important, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention.

See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

Moreover, it should be emphasized that, Stachlecker et al and Nomura et al are alternatively applied. See numbered paragraph 2 lines 2-3, where the above prior art references are applied as *“(Stachlecker et al ... or Nomura*

Art Unit: 1733

et al ...) (bold face in original). To simplify the issue, the Stahlecker patent may be removed as a prior art reference in numbered paragraph 2 above.

As for Counsel's argument on page 4 last full paragraph, it should be noted that, no claim is rejected under 35 USC 102. Moreover, claims 1-3 and 14-20 (NOT claims 1-3 and 14-15) are rejected under 35 USC 103 over Stahlecker et al (US 4,495,758) (NOT over Stahlecker et al (US 4,484,433) in view of the secondary references noted by Counsel.

As for Counsel's argument on page 5 full paragraph 1, simply because Lofquist teaches commingling binder fiber and base fiber together, it does not necessarily mean that, it would have been unobvious in the art from the teachings of Stahlecker et al '758 in view of the secondary references to form a blended yarn by wrap spinning a heat-activated binder fiber around a base fiber. What is critical on the issue of patentability under 35 U.S.C. 103(a) is "what would have been obvious to one of ordinary skill in the art at the time the invention was made in view of the sum of all the relevant teachings in the art, not in view of the first one and then another of the isolated teachings in the art." In re Kuderna, 165 USPQ 575 (CCPA 1970).

On page 5 first full paragraph, Counsel further argues that, "*Stahlecker, et al shows wrapping a binder fiber around a yarn rather than a bundle of a base fiber.*" (yarn was originally italicized). As noted earlier, according to a dictionary definition (The American Heritage Dictionary Secondary College Edition), a term

bundle, it is *"a group of objects tied, fastened, wrapped, or otherwise held together."* As for a term yarn, it is defined from the same dictionary as *"[a] continuous strand of twisted threads of natural or synthetic material, such as wool or nylon, used in weaving or knitting."* Based on the above definitions, a yarn is clearly a group of threads, which are tied or held together by subjecting the threads to a twisting operation. Therefore, a bundle of fibers fail to distinguish over a yarn.

Counsel further argues on the same page and paragraph that GB '116 *"pertains to wrapping a bonding agent in filament form around a preformed twisted pile yarn. There is no spinning a bundle of fibers with a second fiber to thereby form a yarn required by the claims."* (emphasis added). It should be noted that, the *"bonding agent in filament"* is heat-activated binder fiber (page 5 full paragraph 3). Since: a) GB '116 clearly teaches using wrap spinning operation to form a yarn (page 6 lines 9-10); b) as stated by Counsel that, GB '116, *"pertains to wrapping a bonding agent in filament form around a preformed twisted pile yarn"*; and, c) a bundle of fibers fail to define over a yarn, then it is unclear how Counsel could reasonably argues that *"There is no spinning a bundle of fibers with a second fiber to thereby form a yarn required by the claims."* It should be noted once again that, while it is unclear whether the binder fibers in the process of Stahlecker '758 are heat-activated binder fibers, such would have been obvious in the art because: a) GB '116 discloses spinning such as **wrap-spinning** and heat-activating a blend of binder-fibers containing heat-activated adhesive and

base fibers to stabilize a blended carpet yarn thereby *"improving the tuft definition and appearance retention"* (abstract; page 6 full paragraph 1; claim 1); b) Queen et al discloses making yarns for carpet rugs by spinning cotton fibers and heat-activated binder fibers to form blended yarns, ply twisting the blended yarns and then heat-setting the ply twisted yarns to melt the binder fibers *"so that the cotton fibers are impregnated, reinforced and strengthened"* by the fibers (abstract; col. 1 line 48 to col. 3 line 4; claim 1; figure 1); and c) it is old in the carpet art to form a yarn by spirally wrapping heat-activated binder fibers around base fibers using **wrap-spinning** technique as exemplified in the teachings of Scott (col. 2 lines 60-65; col. 6 lines 52-68; figures 3-4 and 8-9; and, figure 3 of Counsel's characterization of Scott in Paper No. 23). Note: Scott also discloses the advantage of enhancing *"the integrity of the fabric"* in using heat-activated binder fibers in forming a blended wrap yarn (col. 2 lines 60-65).

On page 5 last paragraph to page 6 line 6, Counsel argues that, *"Lofquist is not available as prior art application since at the time of their respective inventions, both were subject to an obligation of assignment to the same party ... The examiner's analysis of the comparative filing dates of this application and that of the Lofquist patent is incorrect. The present application has been pending as a series of continuations in part since Nov. 24, 1986, i.e. before the filing date of the Lofquist patent."* (emphasis in original). Examiner strenuously disagrees with Counsel's assertion that *"Lofquist is not available as prior art application since at the time of their respective inventions, both were subject to an obligation of*

Art Unit: 1733

assignment to the same party ...". As noted in a prior office action, an exclusion of commonly owned or assigned prior art under 35 USC 103 (c) filed after 11-29-1999 does not apply to an **RCE application**. As for Counsel's argument that *"The present application has been pending as a series of continuations in part since Nov. 24, 1986, i.e. before the filing date of the Lofquist patent"*, Counsel's attention is directed to MPEP 2133.01. Accordingly, *"When applicant files a continuation-in part whose claims are not supported by the parent application, the effective filing date is the child CIP. Any prior art disclosing the invention or an obvious variant thereof having a critical reference date more than 1 year prior to the filing date of the child will bar the issuance of a patent under 35 U.S.C. 102(b). Paperless Accounting v. Bay Area Rapid Transit System, 804 F2d 659, 665, 231 USPQ 649, 653 (Fed. Cir. 1986)."* (Emphasis added). In other words, when the presently claimed subject matter in a continuation in-part application (CIP) is not fully supported in a parent application, the effective filing date of the CIP is its filing date NOT the filing date of its parent application. The subject matters of the presently claimed invention are not fully supported in a parent application 08/933,822. For instance, claim 1 as presently recited requires *"twisting two or more of the yarns ..."*. This claim clearly reads on twisting, for example, 10 yarns together. It is respectfully submitted that, application '822 does not disclose twisting 5 yarns together much less 10 yarns. Even for the sake of argument that, the claimed subject matters of the present application are taken to be fully supported in parent application '822, the claimed subject matters

Art Unit: 1733

are still not fully supported in grandparent application 08/792,819. It is respectfully submitted that, application '819 does not disclose using a bundle of fibers made of cotton and wool, much less disclose the main essence of the present invention which is to use ring spinning or wrap spinning method to form a blended yarn. For these reasons, at best, the earliest effective filing date of the present invention is 09/19/97.

As for Counsel's arguments on page 6 full paragraph 2 regarding Counsel's assertion that Examiner is selectively extracting pieces of the applicant's invention from several references and reassemble the pieces together using Applicant's disclosure, Examiner strongly disagrees. For instance, the only critical difference between Queen et al and claim 1 is: Queen et al is silent on the type of conventional spinning method which is used to form a blended yarn. One in the art wanting to practice the process taught by Queen et al would have chosen among the conventional spinning (i.e. yarn making) methods such as wrap spinning, ring spinning, etc. to form a blended yarn.

As for Counsel's arguments on pages 6 last full paragraph to page 9 regarding an obvious type double patenting rejection, it should be emphasized that, **ONLY** one-way obviousness test as opposed to two-ways obviousness test is required. Hence, the issue here is whether the presently recited claims would have been obvious in the art over the claimed invention in Patent No. 6,682,618 in view of Queen (US 5,567,256) or Lofquist (US 5,478,624). The only critical limitation recited in the present invention, which is not recited in Patent No. '618 is a

Art Unit: 1733

process limitation recited in step "c". However, the limitation in process step "c" would have been obvious in the art as such is well known in the art. See for instance the teachings of Lofquist or Queen et al. As for a limitation of *"the second fiber is wrapped around or inserted into the bundle of first base fibers"* (bold face and emphasis added), see the recited process step "b" in Patent No. '618, where it clearly recites "... said second fiber being twisted or wrapped around the bundle of fiber" (emphasis added). As for the presently recited limitation *"heating the plied yarn sufficiently to melt the binder material and causing the binder material to flow to intersection points with the first base fiber; ..."*, this limitation is reasonably expected to naturally flow from the claimed process in Patent No. '618 in view of either Queen or Lofquist. Heating binder fibers above a melting point of the binder fibers would intrinsically liquefy the binder fibers, therefore would have naturally flow to intersection points of a first base fiber. Finally as for the recited encapsulation and binding of base fiber, this limitation is also taken to be intrinsic in the claimed process in Patent '618. Since binder fibers are wrapped around base fibers, and since the melted binder fibers flow to intersection points of base fibers, as the melted binder fibers cooled (i.e. hardened), the base fibers must be encapsulated and bound by the hardened melted binder fibers.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1733


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
06-10-04